

REMARKS

Reconsideration and withdrawal of all outstanding grounds of objection and/or rejection are respectfully requested in light of the above amendments and the remarks which follow.

Applicant has amended the specification to incorporate headings in conformance with U.S. patent practice, and to reflect the new claims added by the amendment.

Applicant has also amended the abstract as required by the Examiner.

The Examiner has objected to claims 8, 9 and 10 for the reasons presented on page 2 of the Official Action. By this amendment, all of the pending claims have been cancelled in favor of new claims 11-21. It is noted that the language objected to by the Examiner on page 2 of the Official Action is not found in any of the newly submitted claims.

The Examiner has rejected claims 1-6 and 8-10 under 35 U.S.C. 102(b) as anticipated by Childress '524.

It will be apparent that Childress neither anticipates nor even remotely suggests the subject matter as now defined in independent claims 11 and 22. The claims require perforated tube plates that are adapted to hold a plurality of tubes. More specifically, claim 11 requires a first and second perforated components having complementary surfaces along facing edges that enable a smooth interface between the components. Finally, the claim requires a plurality of pin fasteners extending through the

complementary surfaces of the first and second perforated components to thereby form a connection between the first and second perforated components.

At the outset, it is readily apparent that Childress does not disclose a tube plate that includes first and second perforated components. Rather, Childress is concerned with a structural double lap sheer joint for attaching a fiber reinforced composite structure, i.e., a plurality of laminates, to a metal structure using metal Z-pins that extend through the composite structure and that are welded to the metal. It is also apparent that neither of the components 12 or 14 of Childress have complementary surfaces along facing edges that enable a smooth interface between the components. Rather, the component 14 of Childress is a simple rectangular component with four straight edges, the component sliding within a cavity provided in the other component 12 with raised edges in both sides of the interfaces.

New claim 23 incorporates most of the limitations of claims 11 but further defines the complementary surfaces, and also calls for the components to be semi-circular in shape. Claim 23 is therefore also patentable over Childress.

With respect to independent claim 17, that claim requires first and second semi-circular components joined together mechanically along a smooth interface defined by a pair of straight facing edges. In addition, the claim requires that each of the semi-circular components have a plurality of perforations for receiving individual ones of the tube bundle. There is no such arrangement or suggestion of such an arrangement in Childress.

With respect to the limitations in the various dependent claims, it follows that these claims are necessary patentable by reason of their dependence upon allowable claims 11 and 22. However, certain of the dependent claims contain additional structure nowhere disclosed or suggested in the reference, including claims 13-16, 18 and 24-26.

It is respectfully submitted that the application is now in condition for immediate allowance, and early passage to issue is requested. In the event, however, any small matters remain outstanding, the Examiner is encouraged to telephone the undersigned so that the prosecution of this application can be expeditiously concluded.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



Michael J. Keenan
Reg. No. 32,106

MJK:ljb
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100